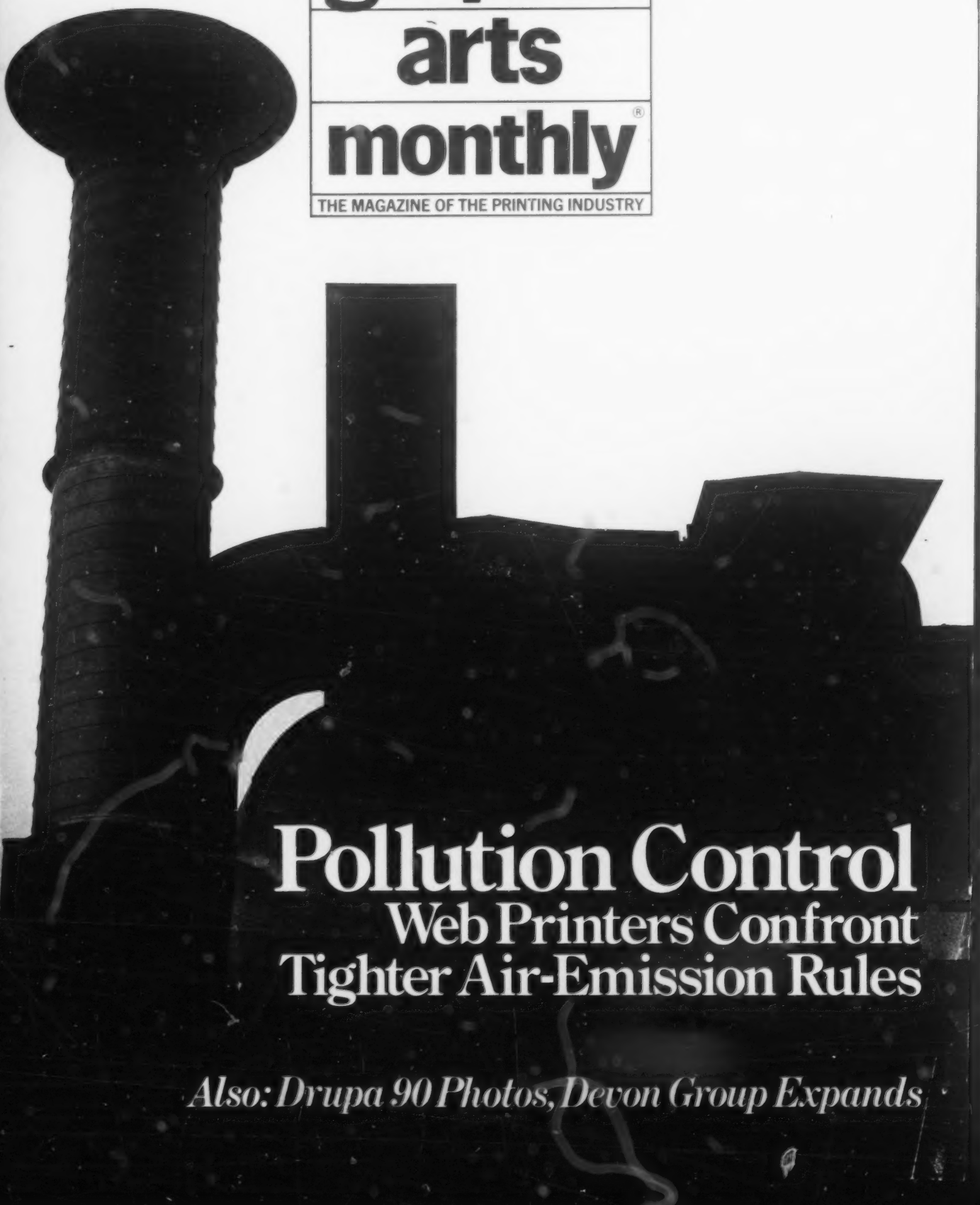
A CAHNERS PUBLICATION JUNE 1990

graphic arts monthly®

THE MAGAZINE OF THE PRINTING INDUSTRY



Pollution Control

Web Printers Confront Tighter Air-Emission Rules

Also: Drupa 90 Photos, Devon Group Expands

VOLUME 62, NUMBER 6

A CAHNERS PUBLICATION JUNE 1990

TOTAL CIRCULATION: 99,585

graphic arts monthly

THE MAGAZINE OF THE PRINTING INDUSTRY

FEATURES

page 90

Drupa 90 Shatters Attendance Marks

Approximately 430,000 visitors attended the world's fair of printing in West Germany. Here's a photo report of the event. 26

Pollution Control

By Lisa Cross

In the quest for clean air, heatset web printers confront a complex array of tighter air-emission rules. 52

Boom In Small Sheetfeds

By Debora Toth

Customer demand for color and higher quality, shorter run lengths, and competition all lead to a downsizing trend. 67

Partners in Progress

By Michael Karol

This printer asked customers what they wanted, and—of all things—listened. 74

Financial Failsafe

By Liz Kaplan

Devon's acquisition of Chas P. Young reflects its intention to support Aztech's efforts to become a top financial printer. 90

Speeding Up The Process

By Michael Karol

Quality, service, and on-time delivery prove irresistible to the customers of this Midwest printer. 96

On The Cover: Photographed by Gary Sigman/ Black Star at Bradley Printing Co., Des Plaines, Ill.

PREPRESS IMAGING

Automating Ad Layout 101

Integrated Pages For Newspapers 104

Contents continues on page 5

graphic arts monthly

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UPFRONT

Mailbox	10
Editorial	12
Outlook	15
Datatable	15
Potpourri	18
Sales Activity	19
Washington	20
Mergers & Acquisitions	22
News	28
Calendar	31
People	37
Companies	39

COLUMNISTS

Self Advertising George Griffin	108
Marketing Dick Gorelick	112
Selling Kenneth P. Garner	114
Estimating Gerald A. Silver	116
Supervising Edgar H. Plagemann	118
Ink Theodore Lustig	119

DEPARTMENTS

New Products	124
Literature	128
How'd They Print That?	130
What's Ahead	132
Index to Advertisers	134
Classified	135

Ink, page 119

Graphic Arts Monthly (ISSN 1047-9325), including The Printing Industry and Business Graphics®, published monthly, except January semimonthly, by The Cahners Publishing Company, A Division of Reed Publishing USA, 275 Washington St., Newton, MA 02158–1630. Terrence M. McDermott, President; Robert T. Brawn, Senior Vice President/General Manager; Jerry D. Neth, Senior Vice President/Publishing Operations; J.J. Walsh, Senior Vice President/Finance; Thomas J. Dellamaria, Senior Vice President/Production and Manufacturing; Ralph Knupp, Vice President/Human Resources; Barrie Stern, Director of Art Department. Executive, editorial, and advertising offices: 249 W. 17th Street, New York, N.Y. 10011. Subscription to individuals $69.95 a year ($129.95/2 years) in the U.S.A. and its territories. Canada and Mexico $110.00. All other nations $120.00 ($220.00/2 years), via Airmail $190.00 ($360.00/2 years). Single copies $10.00. Annual Sourcebook $50.00. Second-class postage paid at Denver, Colo. 80206-5800 and at additional mailing office. Printed in U.S.A. Circulation records are maintained at 44 Cook Street, Denver, Colo. 80602. Tel: (303) 388-4511. Graphic Arts Monthly is a registered trademark of Reed Publishing (USA) Inc. © Copyright 1990 by Reed Publishing USA; Ronald G. Segel, Chairman and Chief Executive Officer; Robert L. Krakoff, President and Chief Operating Officer. All Rights Reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage retrieval system, without permission of the copyright owner. Prices for bulk reprints of articles available on request. Copies of back issues are available on microfilm from University Microfilm, 300 N. Zeeb Road, Ann Arbor, Mich. 48106. (ISSN 1047-9325)

POSTMASTER: Please send address changes to Graphic Arts Monthly, Circulation Dept., 44 Cook Street, Denver, Colo. 80206-5800.

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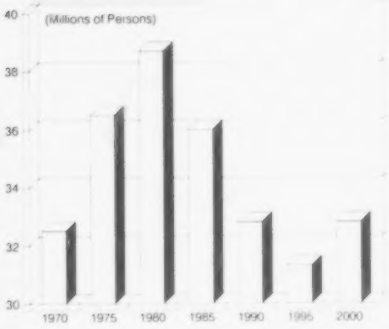
Entry-Level Worker Pool Will Shrink



The size of the entry-level workforce (people between the ages of 16 and 24) has been on a steady decline, making it more difficult for employers to find workers. From 1980 to 1989, the size of this age group fell 13.6% nationwide, to 33.4 million people.

This situation is likely to worsen before it improves. The number of people aged 16 to 24 years old will reach a low point in the mid-1990s before beginning on an upward track. The Bureau of Labor Statistics predicts the population of this age group will decline to 31.3 million by 1995, and reach 32.8 million by the year 2000.

In addition, further declines in availability of entry-level workers will come from the increasing percent of this population that will attend college, thus delaying their entrance into the workforce. The percent of this population enrolled in institutions of higher education increased from 20.3% in 1980 to 22.8% in 1988. These enrollment rates are expected to continue to increase, especially among women.

The actual size of the labor force is a combination of the size of the population and the labor force participation rate. Despite the increase in college enrollment rates, the labor force participation rate among 16-to-24 year-olds is on the rise and should reach 71.3% by the year 2000, up from 68.6% in 1989. Thus, the size of the youth labor force will decline at a slower pace than its total population.

The fastest growing groups, in terms of labor force participation, are women, racial minorities, and Hispanics. By the year 2000, 47% of the entire labor force will be female; racial minorities will account for 16% of the labor force. Less than one-half of the new workers entering the work force over the next 10 years will be traditional white male employees. As the labor force becomes increasingly female and non-white, employers will have to look toward these growing populations for new employees.

Our latest forecasts for paper transaction prices show further declines in 1990, especially in the newsprint and uncoated markets. Printers should continue to enjoy soft paper prices in 1991 as well. The high paper price increases of the past few years are reflected in the 4.5% increase in commercial printing's production price index for 1989. Based on lower costs of paper, this production price index is expected to rise a slower 3.5% by the end of this year, and a slight 2.1% in 1991.

PAPER TRANSACTION PRICES

				Annual % Change		
Paper Category ($/ton)	**Q1/89**	**Q4/89**	**Q1/90**	**1989**	**1990**	**1991**
Newsprint—30 lb. East	$ 585	$ 535	$ 520	-6.8	-7.2	0.9
Directory—uncoated groundwood, 22.5 lb. white	850	730	730	2.3	-7.9	4.4
Supercalendered—uncoated groundwood, 34 lb.	830	830	830	3.1	-1.3	3.2
Offset—uncoated groundwood	675	635	635	-0.8	-6.4	1.5
Offset—uncoated, white, 50 lb.	900	820	820	3.8	-8.9	-1.8
Coated—No. 1, 70 lb.	1600	1610	1610	6.8	2.0	1.6
Coated—No. 3	1220	1250	1250	11.9	0.4	1.6
Coated—No. 5, 34 lb. roto	1000	960	960	1.4	-6.3	1.8
Bond—uncoated white, No. 1, 20 lb.	1100	1090	1090	2.8	-5.3	0.5
Bond—uncoated white, No. 4, 20 lb.	1000	973	950	14.5	-6.7	4.3

Source: Purchasing magazine's Transaction Pricing Service

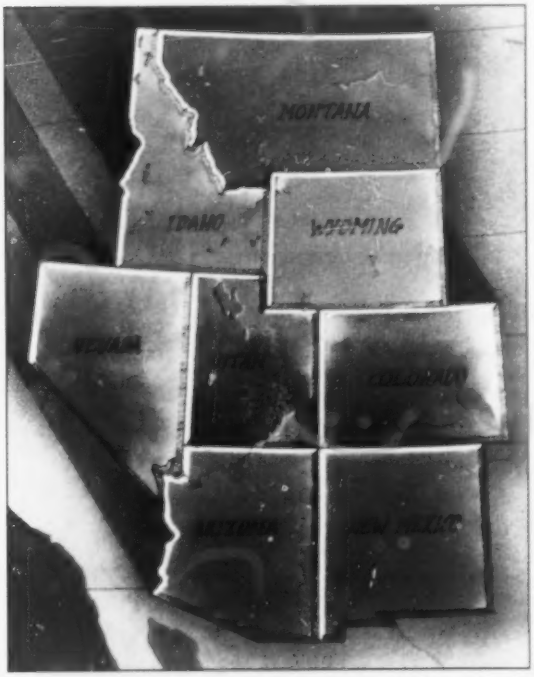
graphic arts monthly

Mountain Region

The first thing you have to remember about the Mountain region is that it contains some of the most beautiful landscapes in the world.

The second thing you have to remember is that there aren't many people living in that landscape. At over 855,000 square miles, it constitutes 24% of the area of the United States. On the other hand, only 5.4% of the population lives there.

This often translates into a poor economy and/or industry, and with a few exceptions, that's true. In terms of per-capita income, it contains four of the *bottom* 10 states, for instance.



Jana Brenning

The southern states—Arizona, New Mexico, Colorado, Utah, and Nevada—are reasonably prosperous. All of them have growing populations, and three of them have per-capita incomes either above or close to the national average. The exceptions are New Mexico and Utah, which, while not wealthy places, are showing some signs of economic health.

The upper-tier states—Montana, Wyoming, and Idaho—are another story. All three states are losing population—partly because of the weather, and the topography. Mountains are inspiring to look at, but they present certain problems if your aim is farming or building factories. In fact, the primary economic activities in these states have been (and mostly still are) mining, agriculture, and ranching. None of these are expanding.

The printing industry in the Mountain region, then, is pretty well concentrated in three states, Colorado, Arizona, and Utah. The least active states, Montana and Wyoming, between them represent about $100 million in printing sales, virtually all of it done by very small shops. Interestingly, the industry is growing like crazy everywhere in the region (well, except for Wyoming). The southern-tier states are enjoying a population boom, especially Arizona, and apparently it is triggering a burgeoning demand for printing.

This, combined with the region's demographics, makes it one of printing's healthier, if smaller, enclaves. The populace is well educated. Every state is ahead of the national average in terms of high-school graduates, and most of them lead in college grads as well. The region seems poised to do nicely on its own terms.

Data for this report come primarily from Printing Industries of America, the National Association of Printers and Lithographers, the U.S. Bureau of the Census, Trade and Technology Press of Stamford, Conn.—the publishers of *Printmarkets*, a highly useful source of industry data—and *Graphic Arts Monthly's* own database.

Reprints of this installation may be ordered from Holly Hoffman, GRAPHIC ARTS MONTHLY, 249 W. 17th St., New York, NY 10011.

By Peter Johnston
Special Projects Manager

Regional Overview

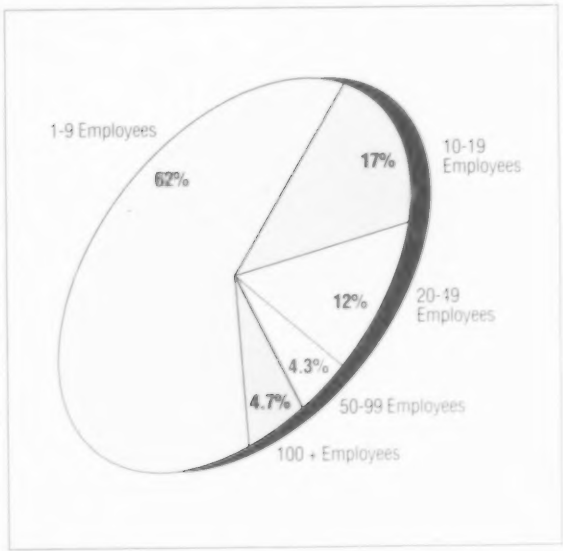
Note that these figures, taken from the GAM database, reflect the universe of printers in its widest sense. In most of the data on the next three pages, a smaller—though still quite large—universe of printers will be used. This is because we will be concerned with the way the printing industry in the Mountain region is divided up in terms of the economic characteristics of the region's printing. This requires us to exclude newspapers, in-plant printers, and certain plants that, while clearly printers, aren't *economically measurable* as such.

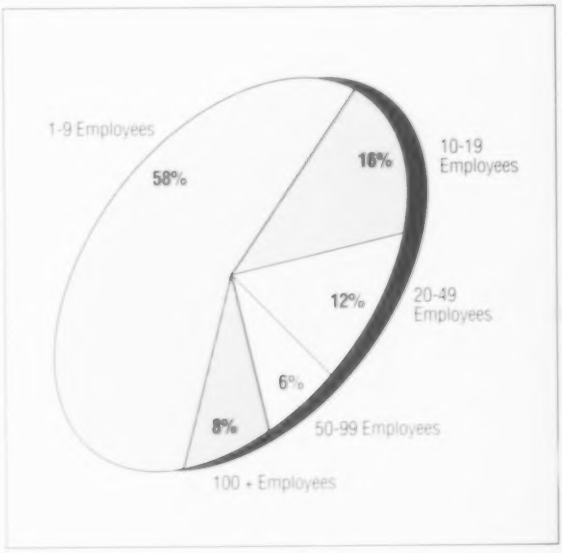
Mountain Region, Plants by Employee Count

Size	# of Plants	% of Region
1–9 Employees	1,423	62%
10–19 Employees	395	17%
20–49 Employees	284	12%
50–99 Employees	105	4.3%
100 + Employees	109	4.7%
TOTAL	2,316	100%

United States, Plants by Employee Count

Size	# of Plants	% of Total
1–9 Employees	29,815	58%
10–19 Employees	8,381	16%
20–49 Employees	6,428	12%
50–99 Employees	3,147	6%
100 + Employees	3,846	8%
TOTAL	51,617	100%





Charts and graphs by Lisa Hilgers

Plants by Function

The Mountain region accounts for about 3.6% of the total U.S. industry. Note the high incidence of newspapers. People are scattered, so local news comes from many small-circulation dailies and weeklies.

Function	# of Plants	% of U.S. Total
Commercial	1,183	4.5%
Newspaper (w/ Commercial)	94	5.8%
Newspaper (w/o Commercial)	131	5.8%
Book & Pub	139	5.5%
Business Forms	32	4.0%
Converters	34	1.8%
Noncommercial	307	4.0%
Trade	146	3.4%
Quick Printers	250	5.5%

Equipment Distribution

Equipment	Sites in Region	% of U.S. Total
Color Scanners	116	4.4%
Sheetfed Presses	1,707	7.1%
Heatset Web Offset Presses	134	3.5%
Folders	924	2.9%

To make sense of these figures, remember that they represent not pieces of equipment but sites where that equipment can be found. The high number for sheetfed presses, for instance, simply means that they are divided up among a larger number of smaller shops than is the national norm. In fact, if you look at the total number of printing sites, it works out to about one press per plant. As for color scanners, in this region are companies doing a national prepress business, notably Arizona's American Color and Colorado's Spectrum.

Commercial Printing

Value of Shipments

Three states (Colorado, Arizona, and—to a lesser extent—Utah) account for 78% of the printing in the region; Colorado alone accounts for more than a third of it. By contrast, Montana and Wyoming together offer $100 million in print sales, less than can be found in an average block in lower Manhattan. Printing is where the people are.

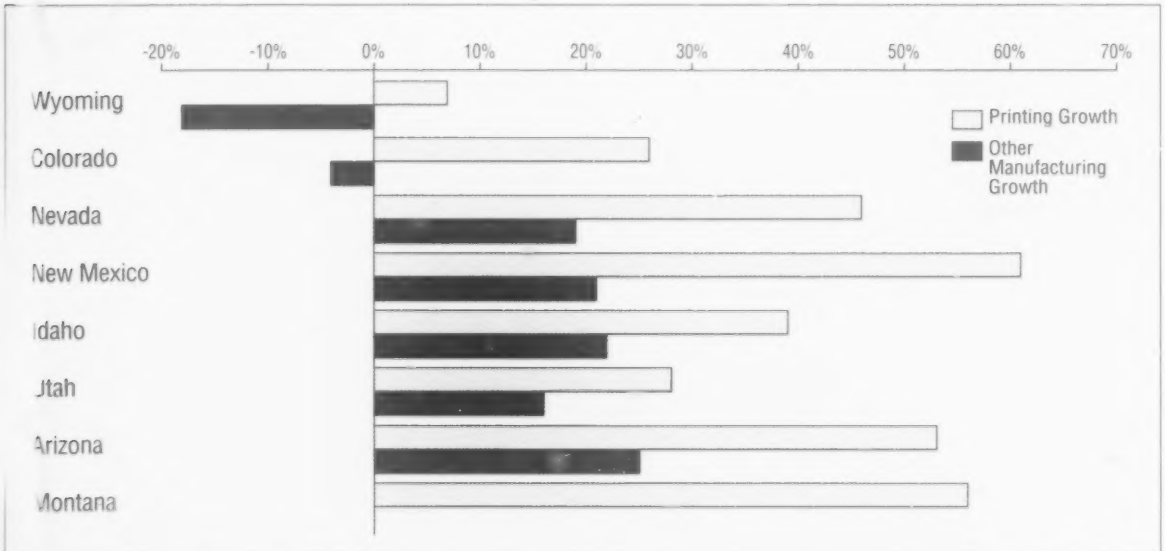
State	Sales	%
Colorado	782	34%
Arizona	658	28%
Utah	363	16%
Idaho	160	7%
New Mexico	134	6%
Nevada	116	5%
Montana	74	3%
Wyoming	26	1%
TOTAL	**2,313**	**100%**

Printing Sites

State	Sites	%
Colorado	651	38%
Arizona	454	27%
Utah	193	11%
New Mexico	128	7%
Nevada	100	6%
Idaho	92	5%
Montana	73	4%
Wyoming	42	2%
TOTAL	**1,733**	**100%**

The distribution of printing sites closely reflects the distribution of sales volume (value of shipments). Colorado, Arizona, and Utah account for 76% of the manufacturing sites in the region. Wyoming, which has 1% of the region's sales, has 2% of its sites, which is consistent with its demographics. Fewer large towns (Wyoming has only two, Casper and Cheyenne) equal fewer large printers.

Printing Employment



Industry employment, by state, is almost exactly proportional to value of shipments. Once again, Colorado is the clear leader in the region, closely followed by Arizona and less closely by Utah. In terms of employment growth, most of the region had a spectacular period during the time measured here (1982-1988), not only in printing but also in other manufacturing.

State	Employees	State	Employees
Colorado	9,294	New Mexico	1,638
Arizona	7,652	Nevada	1,416
Utah	3,899	Montana	897
Idaho	1,666	Wyoming	321
		TOTAL	**26,783**

Leading Printers in Major Markets

Company	Location	Sales
INSERT PRINTERS		**Total 139.0**
R.R. Donnelley & Sons Company	Reno, NV	35.0
Meredith/Burda Corporation	Casa Grande, AZ	30.0
Treasure Chest Advertising	Salt Lake City, UT	25.0
Treasure Chest Advertising	Sparks, NV	15.0
Graphics Arts Publishing, Inc.	Boise, ID	11.5
A.B. Hirschfeld Press, Inc.	Denver, CO	9.0
Intermountain Color	Boulder, CO	8.0
Colorgraphics of Utah	Bountiful, UT	5.5
GREETING CARD PRINTERS		**Total 111.3**
Current, Inc.	Colorado Springs, CO	111.3
CATALOG PRINTERS		**Total 106.0**
R.R. Donnelley & Sons Company	Reno, NV	50.0
Ringier America, Inc.	Phoenix, AZ	40.0
A.B. Hirschfeld Press, Inc.	Denver, CO	5.5
Messenger Graphics	Phoenix, AZ	3.0
Eastwood Printing & Publishing	Denver, CO	2.5
Publishers Press, Inc.	Salt Lake City, UT	2.5
American Web, Inc.	Denver, CO	2.5

Company	Location	Sales
PREPRESS		**Total 94.0**
GBP Industries	Phoenix, AZ	55.0
Volt Technical Services	Phoenix, AZ	23.0
Spectrum, Incorporated	Golden, CO	14.5
Messenger Graphics	Phoenix, AZ	1.5
COMMERCIAL/SPECIALTY PRINTERS		**Total 69.5**
Rocky Mountain Bank Note	Lakewood, CO	15.0
Pro Litho	Provo, UT	12.0
Current, Inc.	Colorado Springs, CO	12.0
Frederic Printing	Aurora, CO	10.0
Imperial Litho Graphics	Phoenix, AZ	10.0
Salt Lake Printing Center	Salt Lake City, UT	8.5
Kistler Graphics	Denver, CO	8.0
Blaine Hudson Printing	Salt Lake City, UT	7.5
Messenger Graphics	Phoenix, AZ	3.0
Colorgraphics of Utah	Bountiful, UT	2.0
Publishers Press, Inc.	Salt Lake City, UT	1.5
DIRECTORY PRINTERS		**Total 76.0**
Norwest Publishing Company	Greeley, CO	70.0
Graphics Arts Publishing, Inc.	Boise, ID	6.0

Demographics in Mountain Region

Population and Migration

State	Population (000)	Rank	Migration (See text.)	Change (%, 80-86)
Arizona	3,279,000	26	365,000	22.1
Colorado	3,267,000	27	165,000	13.1
Utah	1,665,000	35	10,000	14.0
New Mexico	1,479,000	37	64,000	13.5
Idaho	1,002,000	41	−15,000	6.2
Nevada	963,000	43	113,000	20.3
Montana	819,000	44	−14,000	4.1
Wyoming	507,000	50	−6,000	8.0
TOTAL	**12,981,000**		**682,000**	

Potential Labor Pool

State	Age 15-24 (% Population)	Unemployment Rate (%)
Utah	18.7%	6.0
Wyoming	18.1%	9.0
New Mexico	17.3%	9.2
Arizona	17.1%	6.9
Nevada	16.9%	6.0
Montana	16.1%	8.1
Idaho	15.8%	8.7
Colorado	14.0%	7.4

When we look at these statistics we see a microcosm of what is happening in the United States at large. The figure for migration is a particularly important one; it shows what is really happening to a state's population once the birth and death rate are factored out. For example, the figures show that between 1980 and 1986, 365,000 people who used to live somewhere else moved to Arizona. While some of those were of course children, a substantial number were skilled or semiskilled workers--which is precisely what the printing industry needs if it is to grow. By contrast, during the same period Idaho lost 15,000 people ,and Montana and Wyoming together lost 20,000. Again, those are people who moved away, mostly looking for better economic opportunities.

On the other hand, all these states have a substantial percentage of young people and relatively high unemployment, which means that there are people available. The industry may have to train them, but they are there.

As noted, it is a reasonably well-educated populace. The problem here, if you want to think of it as a problem, is simply the small numbers of people. Again, it is necessary to keep the history and geography of the region in mind. Much of the land in all these states is given over to national forests, which means that it cannot be developed. In addition there are national parks and Indian reservations to be taken into acount. (The Navajo reservation that straddles New Mexico, Arizona and Utah is substantially larger than New England.)

MOUNTAIN

Tables of leading printers given in order of overall market size. This will vary from region to region.

Company	Location	Sales
[illegible]		
Rocky Mountain Bank Note	Lakewood, CO	40.0
Moehrmyer Business Forms	Aurora, CO	13.0
BEI Graphics	Boulder, CO	11.0
FINANCIAL/LEGAL PRINTERS		**Total 60.0**
Rocky Mountain Bank Note	Lakewood, CO	60.0
MAGAZINE PRINTERS		**Total 56.0**
American Web, Inc	Denver, CO	13.5
Pacific Press Publishing Assn	Boise, ID	8.5
A.B. Hirschfeld Press, Inc	Denver, CO	7.0
Eastwood Printing & Publishing	Denver, CO	6.5
Ringier America, Inc	Phoenix, AZ	5.0
Salt Lake Printing Center	Salt Lake City, UT	4.5
Intermountain Color	Boulder, CO	3.5
Colorgraphics of Utah	Bountiful, UT	3.5
Messenger Graphics	Phoenix, AZ	2.5
Publishers Press, Inc	Salt Lake City, UT	1.5

Company	Location	Sales
ADVERTISING PRINTERS		**Total 27.5**
Imperial Litho Graphics	Phoenix, AZ	12.0
Pro Litho	Provo, UT	6.0
Frederic Printing	Aurora, CO	5.0
Blaine Hudson Printing	Salt Lake City, UT	4.5
BOOK PRINTERS		**Total 26.0**
Publishers Press, Inc	Salt Lake City, UT	7.5
Pacific Press Publishing Assn	Boise, ID	7.0
Salt Lake Printing Center	Salt Lake City, UT	6.5
Messenger Graphics	Phoenix, AZ	5.0
DIRECT MAIL PRINTERS		**Total 25.2**
Mail Well Envelope	Phoenix, AZ	17.2
Kistler Graphics	Denver, CO	8.0

Figures given for sales are in millions of dollars. Data taken from Printmarkets, Trade & Technology Press, Stamford, Conn.

If you'd like to rent the list of names of people in any of the printing establishments in this section, please contact Jim Long, Direct Mail Services, Cahners Publishing, 249 W. 17th St., N.Y., N.Y. 10011 or call 1-800-537-2900.

The north-south distribution shows up again in per-capita income--though here Wyoming is not at the bottom of the heap. These numbers reflect the kinds of jobs available in the region, the economic situation, and (except for Aspen, Colorado and a few similar pockets of economic derangement) the cost of living.

Let's put this in perspective. So far in this series we have looked at New England, the South Atlantic, the East North Central, and the East South Central regions, comprising 23 states and the District of Columbia. They would *all* fit into the Mountain region, with room left over for New York, New Jersey, Pennsylvania, Arkansas, and Louisiana. The West is more crowded than it used to be, but compared to the East it's still empty.

Land Area

State	Area (sq. mi.)
Montana	145,388
New Mexico	121,335
Arizona	113,508
Nevada	109,894
Colorado	103,595
Wyoming	96,989
Idaho	82,412
Utah	82,073
TOTAL	**855,194**

Educational Attainment

State	High School (12+ years)	College (16+ years)
Utah	80.0%	19.9%
Colorado	78.6%	23.0%
Wyoming	77.9%	17.2%
Nevada	75.5%	14.4%
Montana	74.4%	17.5%
Idaho	73.7%	15.8%
Arizona	72.4%	17.4%
New Mexico	68.9%	17.6%
U.S. Average	66.5%	16.2%

Income and Bank Deposits

State	Income (Per Capita)	Rank	Bank Deposit Increase 1985–1986, %
Colorado	$11,713	9	6.8%
Nevada	11,200	14	23.2%
Arizona	10,561	21	13.3%
Wyoming	9,782	32	−2.1%
New Mexico	8,814	41	2.7%
Montana	8,781	42	−2.4%
Idaho	8,567	45	−0.3%
Utah	8,535	47	7.3%
U.S. Average	$10,797		9.0%